

IN THE CLAIMS:

Please amend the claims, without prejudice, without admission, without surrender of subject matter and without any intention of creating any estoppel as to equivalents as follows:

1-19 (cancelled, without prejudice, without admission, without surrender of subject matter and without any intention of creating any estoppel as to equivalents)

20. (New) Isolated equine GM-CSF.

21. (New) The isolated equine GM-CSF of claim 20 having an amino acid sequence as set forth in SEQ ID NO:9.

22. (New) The isolated equine GM-CSF of claim 20 from expression by a vector that contains an isolated DNA molecule encoding equine GM-CSF.

23. (New) The isolated GM-CSF of claim 22 wherein the isolated DNA molecule has a nucleotide sequence as set forth in SEQ ID NO:8.

24. (New) The isolated GM-CSF of claim 22 wherein the isolated DNA molecule has a nucleotide sequence having 90% sequence identity to SEQ ID NO:8.

25. (New) The isolated GM-CSF of claim 22 wherein the isolated DNA molecule has a nucleotide sequence having 92% sequence identity to SEQ ID NO:8.

26. (New) The isolated GM-CSF of claim 22 wherein the isolated DNA molecule has a nucleotide sequence having 95% sequence identity to SEQ ID NO:8.

27. (New) A composition comprising a veterinarianally acceptable excipient or vehicle and the isolated GM-CSF of any one of claims 20-26.

28. (New) The composition of claim 27 further including an immunogen of an equine pathogen, or an attenuated live equine pathogen, or an inactivated equine pathogen, or a vector that contains and expresses a nucleic acid molecule encoding an immunogen of an equine pathogen.

29. (New) A method of immune stimulation comprising administering to a subject the composition of claim 27.

30. (New) A method of immune stimulation comprising administering to a subject the equine GM-CSF of claim any one of claims 20-26.

31. (New) A method for inducing an immune response comprising administering to a subject the composition of claim 28.

32. (New) A composition comprising a veterinarily acceptable excipient or vehicle and a vector that contains an isolated DNA molecule comprising a nucleotide sequence encoding equine GM-CSF, wherein the vector expresses the isolated DNA molecule *in vivo* in an equine host.

33. (New) The composition of claim 32 wherein the equine GM-CSF has an amino acid sequence as set forth in SEQ ID NO:9.

33. (New) The composition of claim 32 wherein the isolated DNA molecule has a nucleotide sequence as set forth in SEQ ID NO:8.

34. (New) The composition of claim 32 wherein the isolated DNA molecule has a nucleotide sequence having 90% sequence identity to SEQ ID NO:8.

35. (New) The composition of claim 32 wherein the isolated DNA molecule has a nucleotide sequence having 92% sequence identity to SEQ ID NO:8.

36. (New) The composition of claim 32 wherein the isolated DNA molecule has a nucleotide sequence having 95% sequence identity to SEQ ID NO:8.

37. (New) The composition of claim 32 wherein the isolated DNA molecule further comprises a nucleotide sequence encoding at least one immunogen of an equine pathogen or at least one immunologically active fragment of an immunogen of an equine pathogen.

38. (New) The composition of claim 32 further including an immunogen of an equine pathogen, or an attenuated live equine pathogen, or an inactivated equine pathogen, or a vector that contains and expresses a nucleic acid molecule encoding an immunogen of an equine pathogen.

39. (New) A method of immune stimulation comprising administering to a subject the composition of any one of claims 32-36.

40. (New) A method for inducing an immune response comprising administering to a subject the composition of any one of claims 37 or 38.

41. (New) The composition of any one of claims 32-36 wherein the vector is a poxvirus, an adenovirus, a herpesvirus, or a DNA plasmid.

42. (New) The composition of claim 41 wherein the poxvirus is a vaccinia virus, a canarypox virus, a fowlpox virus, a swinepox virus, a raccoonpox virus, or a camelpox virus,

43. (New) The method of claim 40 wherein the vector is a poxvirus, an adenovirus, a herpesvirus, or a DNA plasmid.